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November 7, 2014

Lori Cohen  
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**Re: Documented Corrections to Incorrect Factual Assertions in EPA's October 3, 2014, Response to the LWG's Request for Dispute Resolution Concerning Background in Section 7 of the Draft Remedial Investigation; Lower Willamette River, Portland Harbor Superfund Site, USEPA Docket No: CERCLA-10-2001-0240**

Dear Lori:

In its October 3, 2014 response to the Lower Willamette Group's request for dispute resolution concerning the manner in which background contaminants are assessed in the revised RI Report for the Portland Harbor Superfund Site (the "EPA Response"), the Environmental Protection Agency ("EPA") made a number of incorrect assertions regarding past agreements between it and the LWG and regarding overall project history. The Lower Willamette Group ("LWG") did not address those assertions in its October 14, 2014 reply in support of its request for dispute resolution because they were not directly germane to resolving the issues in dispute. The LWG did, however, indicate that it would be providing documented corrections to EPA's incorrect assertions in a separate letter in order to ensure the accuracy of the administrative record. This letter presents those documented corrections.

### **LWG Documented Corrections to Incorrect Assertions in EPA Response**

For ease of reference, the LWG has copied the incorrect assertions below, with citations to the EPA statements. The LWG's documented corrections to those assertions follow.

A. EPA statement at page 1, paragraph 2: *"In all of this time, the LWG has consistently maintained that the data set contained no outliers and that none should be eliminated from the data set."*

LWG correction: The 2009 Draft RI and the 2011 Draft Final RI present a detailed analysis of each statistical outlier for each contaminant and used multiple lines of evidence, consistent with EPA guidance,<sup>1</sup> to identify and remove from the background data set what the LWG termed

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<sup>1</sup> "Since the treatment and handling of outliers is a controversial and subjective topic, it is suggested that the outliers be treated on a site-specific basis using all existing knowledge about

“primary outliers” to distinguish them from “statistical outliers” identified by the rote application of ProUCL.

B. EPA statement at page 1, paragraph 2: *“Ultimately, EPA provided specific direction to the LWG to eliminate outliers in the draft RI report. The LWG could have raised a dispute at that time after it received specific direction from EPA. Instead, the LWG chose to provide a draft document that didn’t follow EPA direction and this is one of the reasons why EPA is now revising the RI report.”*

LWG correction: The LWG fully followed EPA’s direction on how to present background and address outliers in both the 2009 Draft RI and the 2011 Draft Final RI. In preparation for the 2009 Draft RI, EPA and the LWG held extensive negotiations, including detailed discussions and resolutions regarding how background would be presented. The results of those negotiations are as follows:

March 17, 2009, EPA response to LWG: “Issue number 26: The LWG state[s] that background concentrations will be estimated as directed by EPA on 9/19/2009 [sic, 2008]. However, the table also states that a second set of background values will be developed without exclusion of statistical outliers unless EPA provides credible evidence that the outliers are affected by specific CERCLA like sources(s). The LWG should clarify how this second set of background values will be presented and what is meant by “EPA provides credible evidence.” Please note that EPA and DEQ agreed to investigate potential sources in the vicinity of statistical outlier clusters.”

April 15, 2009, LWG and EPA Agreed-upon resolution: “In the cases of the two chemical groups — total PCB Aroclors and total DDX — for which EPA and LWG reached different conclusions on the disposition of potential outliers in specific locations, the draft RI will present background estimates both with (LWG case) and without (EPA case) these potential outliers retained in the data set. The estimates presented for the two cases will be clearly identified in the RI Report as “EPA Case” and “LWG Case”. By “credible evidence,” the LWG means simply that if EPA and DEQ’s efforts to investigate potential sources yield information indicating the likelihood of CERCLA-like point sources of total PCBs or DDX in the vicinity of the potential outliers in question, then the LWG would agree that it is appropriate to exclude these data from the background evaluation.”

On July 16, 2010, EPA provided comments on the 2009 Draft RI, including the following comment regarding background and outliers:

“The RI Report should clearly present EPA’s determination regarding statistical outliers. Statistical outliers that are geographically clustered should be eliminated because they represent a potential source. Statistical outliers that are distributed throughout the upriver reference area may be retained in the background data set. Note that the ProUCL 4.0

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the site; and regional and site-specific background areas” [from USEPA ProUCL Version 5.0.00 Technical Guide, 2013, p.85].

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guidance states that statistical outliers should be used with caution. We believe that this approach is consistent with the guidance.”

The following is the LWG and EPA agreed-upon resolution of this comment as documented in the LWG’s November 18, 2010 General Responses to EPA’s Non-Directive Comment Key Issues on the Draft Remedial Investigation Report:

“The importance of spatial clustering as a line of evidence for identifying primary outliers is discussed in the fourth bullet on p. 7-14 of the Draft RI, and the LWG’s understanding of EPA’s specific position regarding certain specific cases for total PCB Aroclors and total DDx is discussed in the last paragraph on p. 7-15 of the Draft RI. We believe these discussions adequately address EPA’s position. As discussed on p. 7-15 of the Draft RI Report, EPA agreed (October 2008 verbal communication between R. Wyatt of the LWG and E. Blischke of EPA), in addition to presenting background statistics with these potential outliers removed from the data set, that the LWG could also present background statistics with these values retained in the data set. Both sets of statistics are presented in Section 7 of the Draft RI.”

EPA confirmed this agreement in its December 8, 2010 Response to Non-Directed Comment Resolution Tables (“EPA did allow the LWG to present background statistics with the outliers retained in the data set.”).

It is important also to note that EPA’s method for identifying and removing outliers for the “EPA Case” in the 2009 Draft RI and 2011 Draft Final RI was substantially modified by EPA in its 2013 edits to identify and remove additional data points from the background data set for the final RI Report.

C. EPA statement at page 2, footnote 2: *“The original direction to the LWG requested them to develop the Tables and Figures based on EPA’s worksheets, but since EPA needed to produce them for this dispute, the LWG should now be directed to incorporate them in the final RI Report.”*

LWG correction: The LWG provided Revised Section 7 and Appendix H tables and figures, both of which were based on EPA directions, to EPA on April 4, 2014 (email and sharefile link from Gene Revelas to Kristine Koch).

D. EPA statement at page 5, final paragraph: *“However, the LWG has been directed to calculate background statistics for 23 additional contaminants, consistent with the modified Section 7 in finalizing the RI Report.”*

LWG correction: The LWG provided background statistics for all contaminants to EPA on April 4, 2014.

E. EPA statement at page 9, paragraph 1: *“EPA has noted and provided several comment letters to the LWG regarding clusters as being outliers, especially the four PCB Aroclor outliers and the two DDx outliers. [Exhibit 1]”*

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LWG correction: EPA's comments on the 2009 Draft RI also stated *"Statistical outliers that are distributed throughout the upriver reference area may be retained in the background data set."* The August 29, 2011 comment resolution table goes on to state *"EPA and the LWG agreed that the RI Report would present background statistics for total PCB Aroclors and total DDx in two ways, i.e., with these potential outliers removed from the data set (EPA case) and with these values retained in the data set (LWG case). Both sets of statistics are presented in Section 7 of the Draft Final RI."* See also the LWG's November 18, 2010 General Responses to EPA's Non-Directive Comment Key Issues on the Draft Remedial Investigation Report and EPA's December 8, 2010 Response to Non-Directed Comment Resolution Tables. Therefore, it is more important to recognize the documented agreed-upon resolution of a comment from EPA as opposed to just the comment itself. The LWG stands by its view that these upriver samples are not outliers and has requested that EPA provide evidence of a known, historical source in these areas to support EPA's proposed removal of these "statistical outliers" from the data sets. EPA has yet to provide information linking a known historical source of PCBs in these areas.

F. EPA statement at page 14, paragraph 4: *"In the LWG's discussion #5, the LWG argues that the outliers removed from the data set are more representative of the anthropogenic background than the remaining data set because the TOC of the removed outliers more closely matches the TOC in the Study Area which makes them more representative of the Study Area. They state that the average organic carbon content of all surface samples in the Study Area equals 1.79 percent [EPA note: the correct value is 1.71 percent the average organic carbon content of the reference area is 1.11 percent and the average organic carbon content of the removed outliers is 1.66 percent.]"*

LWG correction: EPA cites the Study Area TOC averages of 1.71 percent used in the 2011 Draft Final RI. As part of the ongoing revisions to the RI, EPA directed the LWG to incorporate all Study Area data formerly included as part of Appendix H into the main report. This additional data changes the average Study Area TOC to the 1.79 percent noted above. [Note: this adjusted ratio, 1.79/1.11, rather than 1.71/1.11 will slightly change the OC-corrected background values included in EPA's Response document Table 6.]

G. EPA statement at page 23, footnote 12: *"Further, specific reaches were not sampled in the upriver reach (RM 19 to RM 21) because of known sources."*

LWG correction: EPA provided no information nor presented any concerns about sources in the reach from RM 19 to 21 in any of the Field Sampling Plan documents reviewed and approved by EPA. The main criteria used to target specific areas for sampling in the upriver reach were based on the objective of finding sediments that most closely resembled the Study Area in physical characteristics (e.g., grain size and TOC). The table below illustrates this point (Integral 2007). Samples were not ultimately collected from RM 19 to 21 because fine-grained sediments were not found in those locations.

Table 4: Upriver Surface Sediment Sampling Locations and Analyses.								
Target Sample Area Centroid <sup>a</sup>				Comments	SVOCs	Metals	Chlorinated Pesticides	PCBs/Aroclors
Area	RM	X	Y					
1	16.4	7646359.44	663882.72	Depression upstream of Ross Island	X	X	X	X
2	16.8	7646746.87	661175.90	Shallow area with one historical fine-grained sample	X	X	X	X
3	17.1	7647757.09	659972.18	Depression with one historical fine-grained sample	X	X	X	X
4	18.5	7650908.06	654427.03	Shallow area on inside of major river bend	X	X	X	X
5	18.6	7651417.51	653569.60	Depression downstream of Elk Rock	X	X	X	X
6	18.8	7651307.58	652824.26	Downstream end of Elk Rock, historical samples (4) are fine- to medium-grained	X	X	X	X
7	19.6	7650171.70	650770.46	Shallow area downstream of seasonally submerged peninsula	X	X	X	X
8	20.0	7648283.63	647920.99	Embayment upstream of railroad bridge	X	X	X	X
9	20.7	7647727.49	643930.10	Shallow "point bar" area on south bank downstream of Lake Oswego Outlet	X	X	X	X
10	21.8	7651048.39	640366.49	Depression downstream of Hog Island	X	X	X	X
11	22.5	7654282.53	637945.72	North bank in area seasonally submerged	X	X	X	X
12	23.2	7655770.44	634741.49	Within the Cedar Island embayment, historical samples (7) are fine- to medium-grained.	X	X	X	X

Table 4 from Portland Harbor RI/FS Upriver and Multnomah Channel Sediment Evaluation and Field Sampling Plan Technical Approach, Appendix A3, May 21, 2007.

H. EPA statement at page 23, final paragraph: *"As EPA has stated before, the background data set is meant to represent the loading from the broader watershed, not from the upriver reach of the river. However, the LWG has conducted no analysis of the potential sediment and contaminant mass available in this reach of the river for scour and re-deposition, as all mass-loading analyses in the 2011 draft RI and 2013 draft FS included data collected down to RM 11. Consequently, even assuming the flood scenario posited on page 2 of the LWG's dispute submittal, the representativeness of outlier values in accurately representing the available contaminant mass is questionable."*

LWG correction: The mass loading analyses presented in the 2011 Draft Final RI, as instructed by EPA, takes into account the known source at RM 11 E in its analysis.

We look forward to meeting with EPA to discuss these matters further.

Sincerely,

The Lower Willamette Group

cc: Richard Albright, EPA ECL Director Region 10  
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Confederated Tribes and Bands of the Yakama Nation (via EPA Shared Server)  
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